Wildlife Book Club:
Plastic Ocean by Charles Moore

Raina Krasner, WCV:
Before book club begins, we have a video to show you. It's about 10 minutes long - it's the film the author (Capt. Moore) mentions in the book. The Captain stars in it.

Amanda Nicholson, WCV
https://www.youtube.com/watch?v=pEKohTXF4Xw

Comment From Becky in SoCal
Well, that woke me up! I'm ready, finished the book yesterday.

Comment From BarbG
sobering as was the book

Amanda Nicholson, WCV:
Ready, everyone?

Raina Krasner, WCV:
Welcome to book club!

Comment From CarolinaGirl ✨✨✨❤
Ready!

Comment From 33mama
Yes.
Comment From Lydia,--PA ♥ °•°• °♥
I looked up that film too after he reference it in is book. Disturbing beyond belief and very sobering. I never realized how bad the plastic pollution is

Chapin Hardy, WCV:
Ready!

Comment From rejoyce
Ready!!!

Raina Krasner, WCV:

Comment From CK in Pa
I'm ready. Finished the book this afternoon.

Comment From Kathy in NM ♥
Since I've only read a little more than half of this book, I guess I'll be joining Izzy in the back corner. I'm looking forward to hearing everyone's thoughts on this important subject.

Raina Krasner, WCV:
So what did everyone think about this book?

Comment From rejoyce
Certainly a book that I will not forget.

Comment From Becky in SoCal
Reading this book was heartbreaking, and now, seeing the video, brings it to life.

Comment From BarbG
unforgettable

Comment From CarolinaGirl °•°• °♥
Very sobering. Made me look at plastic in a whole new way!

Comment From 33mama
The book was disturbing and overwhelmingly upsetting.

Comment From SEK in CO
I finished bout 3 weeks ago and it still haunts me today - the incredibly huge issues that I never knew about.
Comment From rejoyce
It devastated me to think of what man has done to our beautiful oceans and the creatures who live there,

Comment From Lydia,--PA ♥قطعث ♥
It made a huge impact on me. The consequences of the plastic pollution are so far reaching and devastating--to both man and critters!

Comment From Becky in SoCal
Definitely viewing plastic in a new way. It is so hard to purchase items that do not have plastic.

Raina Krasner, WCV:
It is. Very challenging.

Amanda Nicholson, WCV:
Agreed -- it really is everywhere!

Raina Krasner, WCV:
It would be a very different world without the many types of plastic we use.

Comment From rejoyce
He is so right -- it is everywhere!!!

Comment From TerryMI
Eye opening. Never knew plastic could be such a problem

Chapin Hardy, WCV:
It was incredibly eye opening.

Comment From CarolinaGirlقطعث ♥
I have eliminated mos all plastic in my kitchen. Most difficult to find a coffee maker with no l=plastic.

Raina Krasner, WCV:
Wow, that's pretty impressive.
I was aware of various plastics in my daily life, but they are really highlighted after reading this book.

Comment From rejoyce
We have given over so much to convenience, it's difficult to cut out the plastic -- even for those who want to!

Comment From 33mama
Who would have guessed that junk floating in the ocean collected in certain areas?

It all returns to the ocean in the end.

Yea, he definitely gives a good explanation as to why the garbage "soup" gathers in place - due to currents and certain weather activity.

What were some of the themes you noticed in the book? Or topics you found most interesting?

It's made me think every time I pick up something plastic -- I try to think of a way to replace it with glass or something else.

Okay seeing a few threads of conversation here ... ingesting plastic (both wildlife and humans) ... plastic poisoning us ... the microplastics ...

Being older, I remember the 50s as a kid with no plastic and how it just came gradually into our lives.

Very interesting -- you experienced "welcoming" the age of disposability!
Raina Krasner, WCV:
It seemed like a good portion of the first 1/3 of the book talked about how plastic was introduced into our lives.

Raina Krasner, WCV:
And I found the idea of "planned obsolescence" to be a really powerful thought.

Comment From Pat, NJ
Barb, you are so right.

Chapin Hardy, WCV:
I admit that I really knew to the full extent how plastics were made. It’s pretty incredible.

Comment From BarbG
I remember it was touted as helping us-never thought of consequences

Comment From rejoyce
Yes, I remember the days of glass milk bottles and glass soda bottles. I have always said that things taster better in glass!!

Comment From 33mama
Back then, plastic was "the thing"--the material of the future. We sure made a mess of things.

Comment From Kathy in NM ♥
It's hard to call disturbing things "interesting", but the proliferation of plastics in practically every aspect of our daily life was eye-opening, to say the least.

Amanda Nicholson, WCV:
It was interesting to read why some plastics -- the early kind -- were invented. Some were to replace the hard-to-get "stuff" that came from animals (shellac, ivory for billiard balls, etc)

Chapin Hardy, WCV:
It really is shocking!

Comment From CarolinaGirl 😹❤️ iht
I too was a child in the 50s. One of the first plastic toys I remember was the hula hoop. Most things were metal or glass.
Comment From 33mama
Or wood, CarolinaGirl.

Comment From BarbG
Hula hoops as a kid too--we were facinated

Comment From 33mama
Or wood, CarolinaGirl.

Raina Krasner, WCV:
I found this statistics about packaging pretty upsetting – 53% of packaging material is plastic. It reminded me of this Buzzfeed list that came out a couple of years ago. Absolutely fascinating!

Raina Krasner, WCV:

Comment From rejoyce
I enjoyed the history of how plastics evolved and came into our lives. Very interesting!

Comment From Becky in SoCal
If only we had glass milk and soda bottles. I grew up with those also. We used wax paper instead of plastic wrap.

Comment From rejoyce
Same here Becky!

Comment From Lydia
When I was a kid almost everything came in glass. Now all it replaced by plastic. And how toxic it is. I had not clue that plastic contained so many toxins

Chapin Hardy, WCV:
It's a bit unsettling isn't it?

Raina Krasner, WCV:
Which brings us to another topic that people mentioned a few times so far ... toxins from the plastic.
Amanda Nicholson, WCV:
Lots of comments about the toxins!

Chapin Hardy, WCV:
The chemical leaching from plastics and how it interacts with our bodies and wildlife.

Comment From Becky in SoCal
The brief discussion about the chemical from the plastic shower curtain was shocking.

Comment From rejoyce
His stress on how plastic is BAD on so many levels, and how it gets into our bodies without us even realizing it.

Comment From TerryMI
How the plastic starts its poisoning from the very beginning and ends up in us.

Comment From SharonShneyer, Philadelphia
The book was terrifying, some of the stuff I knew about, but as a recovering cancer patient (let alone the cancer epidemic), I have known for a longtime about the estrogen link.

Comment From rejoyce
And when I think about how everything that most babies are exposed to has plastic-- from diapers to bottles, high chair trays to baby food containers, etc.

Comment From CarolinaGirl ʕ•ᴥ•ʔ♥
NEVER EVER heat food in plastic!!!

Comment From rejoyce
It's frightening!

Comment From Becky in SoCal
Yes, rejoice, how sad that babies had this exposure from day one. I think it explains a lot of the diseases we rarely saw when we were kids.

Comment From Pat, NJ
Remember when Tupperware was introduced and how great it was. That was the first plastics I remember

Comment From rejoyce
For some time now, I have refused to heat up anything in the microwave in plastic.

Comment From 33mama
And that the toxins come out of the plastic!
Raina Krasner, WCV:
Very upsetting.

Comment From Izzy
Interesting to read as perhaps a "later" generation CN member that so much was NOT plastic. Everything I've grown up with is plastic in one type or another.

Raina Krasner, WCV:
Yes!

Chapin Hardy, WCV:
A friend of mine is actually doing research on lab mice and BPA.

Raina Krasner, WCV:
I think that many of my toys growing up were plastic ... including ...

Beanie Baby

Comment From CarolinaGirl ʕ•ᴥ•ʔ♥
See...I hadn't thought of Beanie Babies!!
Raina Krasner, WCV:
Yes, Beanie Babies may seem innocuous. But in fact, they are filled with nurdles.

Raina Krasner, WCV:
Nurdles are the pre-production material for plastic manufacturing.

Chapin Hardy, WCV:
Amazing how something so small can cause such big problems.

Raina Krasner, WCV:
Teeny tiny.
Raina Krasner, WCV:
Is that nurdle? It looks upsetting. Looks kind of like eggs.

Comment From PattyMI
Nurdles is a cute word though

Amanda Nicholson, WCV:
Teeny tiny plastic.

Comment From SEK in CO
Are nurdles the same stuff in bean bag chairs?

Chapin Hardy, WCV:
Yep! I would think they were eggs if I saw them in the water.

Raina Krasner, WCV:
Maybe! It's polyvinylchloride.

Comment From Regina, IL
If you were to recycle beanie babies, where would they wind up?
Raina Krasner, WCV:
No idea.

Chapin Hardy, WCV:
The ocean

Raina Krasner, WCV:
Oh sad.

Comment From 33mama
So do the fish and turtles and birds think they are eggs!

Raina Krasner, WCV:
Yes!

Raina Krasner, WCV:
Exactly.

Comment From rejoyce
The poor ocean life is trying to eat and all that plastic mimics shiny fish. It is so sad and so wrong.

Comment From Lydia,—PA ♥石油化工 ♥
Nurdles are really bad guys! and bottle caps! I am stunned by the bottle caps numbers polluting our earth. Moore calls them and indicator item

Comment From BarbG
or in our lakes and streams first

Amanda Nicholson, WCV:
Very true -- illustrates the importance of understanding watersheds!

Amanda Nicholson, WCV:
The stuff that is on the ground -- the regular litter -- can end up in storm drains or end up blowing into streams. Which lead to rivers ...
Comment From rejoyce
Everything we put into our earth systems eventually comes back to us in some form. If we put out poison, that's what we are going to get.

Comment From Lydia,—PA ♥  }}/ /? *♥
I never realized how long plastic stays around. Moore says plastic decays into fragments, then nanoparticles that may go on polluting for centuries! And plastic bottle caps for millions of years!! The Great Pacific Garbage Patch!

Amanda Nicholson, WCV:
Which lead to the ocean.

Amanda Nicholson, WCV:
Right. The macro stuff breaks down into micro-plastics ... just keeps breaking down, smaller and smaller, and never goes away.

Amanda Nicholson, WCV:
We also contribute significantly through products with microbeads!

Chapin Hardy, WCV:
 Boo microbeads!

Amanda Nicholson, WCV:
Everyone familiar with them? We've probably all had products with microbeads. I know I have, not really understanding what they were. I have a good video ...

https://www.youtube.com/watch?v=uAiiGd_JqZc

Chapin Hardy, WCV:
I stick to natural apricot scrub.
Raina Krasner, WCV:
Me too!

Comment From SharonShneyer, Philadelphia
There was recently legislation introduced to ban them in facial products, it is a congressional house of representatives bill.

Comment From rejoyce
That is disgusting!

Comment From BarbG
Big push in Michigan to get them out of products and stay out of the Great Lakes

Amanda Nicholson, WCV:
And, the ocean isn't the only place they show up -- they are in other water ways (before they get to the ocean)

Comment From Izzy
Yikes had no idea micro beads were plastic! Always thought they felt very gritty and gross though, guess I know why now!

Comment From 33mama
I need to start reading labels more carefully!

Amanda Nicholson, WCV:

Comment From CarolinaGirl ʕ•ᴥ•ʔ♥
Guess I’d better read labels more closely! Ban the Beads!

Comment From rejoyce
And they end up in our food and then in us.

Comment From Izzy
If fish eat other fish that have ingested the beads, does the toxicity for them rise, since the beads seem to capture more and more toxin over time?

Comment From rejoyce
It angers me that this stuff is in soooo many of the items we use that it makes it a challenge to find products without them.
Amanda Nicholson, WCV:  
There’s an app for that!

Raina Krasner, WCV:  
I think so … a sort of bioaccumulation.

Amanda Nicholson, WCV:  
http://onepercentfortheplan...

Comment From rejoyce  
Great!!! :)

Comment From Becky in SoCal  
This is all so overwhelming.

Comment From Lydia,--PA ♥ ง•ั̊ร•ัํย *♥
This says it all. This was just a good quote and typed it and saved it: (by Art Buchwald in Chapter 8): “And man created the plastic bag and the tin and aluminum can and the cellophane wrapper and the paper plate, and this was good because man could then take his automobile and buy all his food in one place and He could save that which was good to eat in the refrigerator and throw away that which had no further use. And soon the earth was covered with plastic bags and aluminum cans and paper plates and disposable bottles and there was nowhere to sit down or walk, and Man shook his head and cried: “Look at this Godawful mess”. This says it all. Just add and Man cause HARM and began to wipe out the wildlife population and cause health problems for humans.

Amanda Nicholson, WCV
Comment From Izzy
I found it interesting/gross that even canned food can be an issue since the cans can be lined with BPA resin! How many cans of spaghetti, soup and other items did I eat as a student...endless! Now I'm regretting it a little bit

Comment From CarolinaGirl ✝️爱心️
Wonder if there is an app for BPA resin lined cans??

Raina Krasner, WCV:
Not sure.

Amanda Nicholson, WCV:
So, I see several comments about the albatross -- I know that was probably hard for a lot of us to read!

Comment From Lydia,--PA ♡•••? *♥
I found it sobering and sad to read about the albatross chicks being fed ocean caught plastic because it looks like fish eggs or seas creatures. And the fate of the Monk seals, and the seas turtles, and so many critters.

Comment From SEK in CO
The passing of the plastic from the mother to the chicks and then the predator birds then getting it - a huge cycle I never thought about before.
Comment From rejoyce
The most heartbreaking part to me was thinking about their bodies filling up with plastic to the point that they can’t digest the food any more and they starve to death :(

Amanda Nicholson, WCV:
The entire situation is heartbreaking. And ... albatross are seriously amazing and cool. So, this is difficult to watch, but is also very beautiful:

https://www.youtube.com/watch?v=PLkTTJW4xZs

Chapin Hardy, WCV:
And how it is a race against time for them to get the ability to throw up their food.

Comment From rejoyce
I cried when I read that part of the book :( 

Comment From rejoyce
Now I’m crying again :( We have no right to kill the earth's beautiful creatures like that!!!

Amanda Nicholson, WCV:
Now that we’re all weeping ...

Comment From Izzy
This seems so tragic, have patients ever come to WCV with plastic ingestion? Could this not someday (if not already) be the same fate for eagles or osprey that depend on fish for food?

Comment From Lydia,--PA ♥ ５星？*♥
Unbearably sad! Breaks my heart. I agree with what David Osborn proposed to the United Nations Environment Program: that all plastic packaging have the label warning of the threat to wildlife-suffocation, starvation and blockages

Comment From BarbG
so tragic

Amanda Nicholson, WCV:
Izzy - we have seen some plastic ingestion, but nothing to that great extent. So incredibly sad.
Comment From Becky in SoCal
Tears hear, what have we done to our earth, and how can we stop this.

Comment From rejoyce
We have to ask ourselves -- hat have we done??????

Comment From Guest
Many years ago while on a cruise, I stood at the back of the ship and was appalled as I watched all of the trash being unloaded into the sea. Plastic, cans, just everything.

Comment From Kathy in NM ♥
Me Too, rejoyce. Heart-breaking.

Chapin Hardy, WCV:
That's awful!

Comment From Lydia,--PA ♥ ʕ•ᴥ•ʔ *♥
Moore writes that plastic toxins also cause autoimmune dysfunction in seabirds, marine mammals and sea turtles. These include thyroid disorders and disease and reproduction decline. It was disturbing to read that plastic toxins are in everything we touch and eat and breathe; either from production of plastic or form toxins that ride on plastic floaters.

Chapin Hardy, WCV:
I was shocked by the lack of regulations for dumping from fishing boats and other vessels.

Comment From rejoyce
I've heard that about the cruise ships.

Raina Krasner, WCV:
The lack of maritime law regulations regarding loss at sea was just very confusing.

Comment From Lydia,--PA ♥ ʕ•ᴥ•ʔ *♥
And Moore made some reference to the Navy not having been prohibited from dumping their plastic trash into the ocean when commercial vessels were banned?

Raina Krasner, WCV:
Ohhh I don't remember that!

Comment From rejoyce
I was also shocked that so many countries do not have regulations.
Comment From Lydia,—PA ♥ ♤♠♠? *♥
Oh I do and it made me REALLY mad Raina!

Raina Krasner, WCV:
That's very upsetting.

Comment From CarolinaGirl ♤♠♠? ♥
I remember that. My hubby was a Navy man!

Chapin Hardy, WCV:
I remember how they said ships have burners on board and they can dump the ash.

Comment From Lydia,—PA ♥ ♤♠♠? *♥
The pictures in Moore's book broke my heart when I saw them. Gosh this film makes you sob

Comment From CarolinaGirl ♤♠♠? ♥
What are people thinking when they unload trash into the ocean? It is just plain littering for starters!

Raina Krasner, WCV:
And not all of it is as direct as littering into the ocean.

Chapin Hardy, WCV:
Some burn it (which is still really bad) but many ships don't heat the plastic first and then burn it so that most of the trash doesn't really burn up. So they release chemicals and put trash into the ocean.

Amanda Nicholson, WCV:
Overall, I think the "Indigestible" chapter got the biggest reaction from me ... ugh. Rage.

Amanda Nicholson, WCV:
Because he also talked about something else that drives me nuts and fills me with rage ... balloon releases!
Chapin Hardy, WCV:
Yes!

Raina Krasner, WCV:
Ughhh. Balloon releases ...

Amanda Nicholson, WCV:
Talk about littering ... right into the air!

Chapin Hardy, WCV:
The Hannah Montana balloon!

Amanda Nicholson, WCV:
And what goes up ...

Raina Krasner, WCV:
... Ends up in the ocean!

Comment From CarolinaGirl ʕ•ᴥ•ʔ ♥
I detest balloon releases!!

Comment From rejoyce
Balloon releases are terrible!!

Comment From Lydia,--PA ♥♦♥♥ ♥
oh I have been on a soap box about balloon releases for years!!

Amanda Nicholson, WCV:
There was legislation pending to tighten restrictions in VA on balloon releases -- but it failed to pass.

Amanda Nicholson, WCV:
But, Virginia is one of the few states that does have some restrictions in place -- it's illegal to release more than 50 balloons at once.
Comment From CarolinaGirl ʕ•ᴥ•ʔ ♥
Glorified littering!!

Comment From katiesmom
When I hear about balloon releases, I want to run madely at the people and say NO BO NO NO NO!!!!!!

Comment From rejoyce
Must come down :

Comment From rejoyce
I don’t understand why people don't realize that those balloons have to come down somewhere .....

Amanda Nicholson, WCV:
They really don’t though -- I don't think people think about it. So, we have work to do -- educate! Talk to people and make them care.

Comment From Lydia,--PA ♥ ʕ•ᴥ•ʔ *♥
And the plastic bags! I was astounded to read about a Byrde’s whale necropsy revealed six yards of compressed shopping bags in its gut.

Chapin Hardy, WCV:
I thought the balloon industry’s rebuttal on how it would be a big economic loss to ban balloons ridiculous.

Amanda Nicholson, WCV:
Right -- and ...
Amanda Nicholson, WCV
In the book.

Chapin Hardy, WCV:
Plastic bags are bad news.

Raina Krasner, WCV:
Plastic bags are bad news.

Comment From Becky in SoCal
Do people just not understand how large this problem is? I can't understand why they would not want to protect our environment and our wildlife, and ourselves!

Comment From Izzy
Balloon releases make me angry now, because WCV has told us the cycle of what happens to them! I had no idea growing up the harm that those balloons could do! Now when friends are having weddings or ceremonies I actually implore them not to do a balloon release!

Comment From Lydia,—PA ♥ férence *♥
And Takada study also compared 2 dominant plastic types polyethylene and polypropylene. Polyethylene is the most abundant and used in most plastic packaging and plastic shopping bags and Moore said it is 75% of the ocean samples and is the most toxic.
Comment From Izzy
In my town groups are forever cleaning up the shorelines of our lakes. People are constantly dumping garbage cans, plastics and bottles everywhere in particular boaters and tourists! We have seen canada geese choke because of such negligence and turtles get caught in the plastic rings from pop six packs!

Comment From rejoyce
Great photo!!!! Really gets the point across!

Comment From Lynn1102
I did not read the book, but was wondering if they mentioned how many thousands of miles some of this stuff travels?

Raina Krasner, WCV:
They did not (as far as I can remember?) but very, very far. The "patch" he talks about is pretty long and deep into the Pacific Ocean.

Comment From Lydia,—PA ♥ ʕ•ᴥ•ʔ *♥
Right, as Moore says the ocean is downhill from everything..all the plastic litter eventually ends up there.

Comment From Lydia,—PA ♥ ʕ•ᴥ•ʔ *♥
And Light sticks! How harmful. Never even thought about them before and never realized fishing industry used them. How toxic!

Comment From SharonShneyer,Philadelphia
We see this every Summer at the Jersey Shore (and other places too), when they cannot let people go into the ocean. And then the beach goers are not even told to take their trash with them!

Raina Krasner, WCV:
I remember my dad telling me stories about when I was young and we lived in NJ, there were times we couldn't go to the beach because waste was washing ashore.

Comment From cwerb §•••? ♥ §•••? ♥ §•••? §•••? §•••? §•••? §•••? §•••? §•••?
this is extremely heartbreaking. I could not have gotten through the book.

Raina Krasner, WCV:
Sometimes the hardest lessons are the most important.

Comment From Lydia,—PA ♥ ʕ•ᴥ•ʔ *♥
Take your own bags when you go to the store. Nor more plastic shopping bags. Keep a couple of clothe bags in your car on purse for those unplanned stops for small items. That is what I have started to do.
Comment From Becky in SoCal
We have the same issue in SoCal, beaches closed due to various hazards in the water.

Comment From CarolinaGirl 😢💔❤️
I wish we could outlaw plastic shopping bags. In Europe they are not used.

Comment From rejoyce
It's such a simple thing to take your own bags to use! Everyone could do it!

Comment From Izzy
Here plastic bags cost 15-25 cents each doesn't always deter everyone from using them however! But there are more and more people purchasing reusable bags, or reusing other containers such as cardboard boxes to carry items in. I just think perhaps we shouldn't have the alternative of a plastic bag all together, do away with the harmful!

Raina Krasner, WCV:
So one thing I remember from the book is the mention that otters and crustaceans are some of the few marine wildlife that haven't shown signs of ingestion.

Raina Krasner, WCV:
BUT ... we know that otters are certainly impacted by plastic, particularly plastic bags.

Raina Krasner, WCV

Mother otter at Elkhorn Slough in Moss Landing, CA tries to free her pup from a plastic bag. Photo by Terry McCormac

Baby Otter Trapped in Plastic Bag

Chapin Hardy, WCV:
And Monk Seals!
Raina Krasner, WCV:
I shared this picture during our Wild Waterways class. A baby otter became entangled in a plastic bag.

Comment From Becky in SoCal
Oh, so sad.

Comment From rejoyce
Oh no :(

Comment From Becky in SoCal
Do you have any ideas as to why this has happened in otters and crustaceans?

Comment From Izzy
Do otters and crustaceans have a different bodily system that would help them to eliminate the contaminates easier?

Raina Krasner, WCV:
I honestly don't know!

Raina Krasner, WCV:
Perhaps diet has something to do with it?

Chapin Hardy, WCV:
I think so!

Raina Krasner, WCV:
And yes, Chapin ... Monk Seals were discussed around the same time as otters and crustaceans.
SO CUTE.

Comment From rejoyce
Adorable!!!

Comment From Becky in SoCal
I see them every time I go to Kauai. They sometimes just lay on the beach near where I stay.

Comment From CarolinaGirl ʕ•ᴥ•ʔ♥
So cute and innocent.
Raina Krasner, WCV:
Cute ... but they suffer greatly from fishing waste.

Raina Krasner, WCV

Photo Credit: NOAA

Amanda Nicholson, WCV:
This is a really happy book club.

Raina Krasner, WCV:
::sarcasm::

Comment From CarolinaGirl 🌈(Button?)♥
Oh, good grief! What a mess!!

Comment From ▼Dave in Missouri▼
Are the WCV bags you sell bid enough for grocery shopping?

Raina Krasner, WCV:
Absolutely!
Comment From SharonShneyer, Philadelphia
Well I am now taking my own and extra plastic shopping bags when I go out, and I am saving a pile on the porch to eventually be recycled somewhere, maybe UPenn has something. Sometimes, you need plastic to help prevent leakies.

Comment From Regina, IL
It may not be happy but it's educational

Comment From sue in Maine
i use my Buddy bag and Mr BC bag for dry groceries.

Comment From rejoice
I take my WCV totes everywhere :)

Amanda Nicholson, WCV:
Yes!

Raina Krasner, WCV:
Totes!

Chapin Hardy, WCV:
While it is very sad, there are lots of things we can do to help.

Comment From Becky in SoCal
What else can we do to improve this situation?

Chapin Hardy, WCV:
Let's lighten the mood!

Comment From Becky in SoCal
Is there anything we can do to put a "dent" in this?

Chapin Hardy, WCV:
Yes! First and foremost being environmentally conscious shoppers is a big step!
Raina Krasner, WCV:
Ohh!

Before we move on to "happy solutions" ...

Your comment reminded me of something, Chapin.

Chapin Hardy, WCV:
Oh?

Do share!

Be a conscious shopper! And hold the companies accountable. The companies producing the waste.

Definitely!

The Captain briefly talks about "debris forensics" - tracing the waste back to the source. Which reminded me of a citizen science project called Litterati. Have you heard of it?

http://www.litterati.org/landfill.php
Chapin Hardy, WCV:
Yes!

Raina Krasner, WCV:
While it’s a slightly different concept, it reminds me of Litterati – a citizen-science campaign but for terrestrial litter and it was not scientifically conducted. People took photos of litter they found and geotagged it. Part of the mission of Litterati was to connect with businesses who had items that were showing up in the landscape (e.g. Starbucks cups). This reflects what the author said about connecting with the plastic industry – directly reaching out to the companies whose products were polluting the waterways.

Chapin Hardy, WCV:
It pops up on our twitter news feed a lot.

Raina Krasner, WCV:
He did get a lot of resistance to that channel - as some of you noted.

Raina Krasner, WCV:
It's a cool project!

Comment From rejoyce
So many companies and countries just don't care about the issue and won't implement measures to address the problem.

Comment From rejoyce
The lack of concern on so many levels was very disturbing. Agencies and governments that could help don't do it because of profit, etc.

Comment From BarbG
I was amazed at how hard of a time he had to be heard even up to now

Comment From Lydia,-PA ♥ ‿���? *♥
Becky I like what Moore says: The 4 R’s. Refuse, Reduce, Reuse, Recycle

Comment From rejoyce
The companies need to be held accountable and responsible!
Chapin Hardy, WCV:
Yes they do.

Chapin Hardy, WCV:
But by being conscious shoppers and making this knowledge known puts the pressure on companies and also inspires others to take a stand...

Raina Krasner, WCV:
It does.

Chapin Hardy, WCV:
Like Boylan Slat! Do any of you know who that is? No googling!

Chapin Hardy, WCV

Comment From Becky in SoCal
Don’t know.

Chapin Hardy, WCV:
At just 19 years old, Boylan Slat came up with a way to have the ocean clean itself!
Comment From Regina, IL
Gee, he looks young!

Comment From Pat, NJ
A young’un.

Comment From GN
Another thing you can do is pay attention to who is financing your political candidates. If they are supported by the chemical industry, polluters, etc., it is not because they want them to clean up their act. Just the opposite.

Comment From BarbG
tell us more

Chapin Hardy, WCV:
He is 21 now.

Chapin Hardy, WCV
This is his design.

http://www.theoceancleanup.com/
http://www.theoceancleanup.com/

Raina Krasner, WCV:
Isn't there a cool video? With cool, uplifting music?

Raina Krasner, WCV:
That makes you feel like there is some hope, even though there is little?

Chapin Hardy, WCV:
There is! Hold on one sec!
https://www.youtube.com/watch?v=6IjaZ2g-21E

Comment From Lydia,--PA ♥ •••? *♥
well that was uplifting

Chapin Hardy, WCV:
The Ocean Cleanup Array is an anchored network of floating booms and processing platforms will span the radius of a gyre.

Comment From CarolinaGirl ʕ•ᴥ•ʔ ♥
It's a start. We need young people to be interested in finding ways to get this job done.

Comment From 33mama
It would help if the waste water plants could filter out the nurdles!
Chapin Hardy, WCV:
The booms act as giant funnels where the angle of the booms effectively 'suck' trash in.

Raina Krasner, WCV:
They are tiny - no idea if that's in the scope!

Amanda Nicholson, WCV:
So I'm curious as to if that filters out microplastics. Or just the macrostuff?

Raina Krasner, WCV:
I didn't quite get that info from the film.

Chapin Hardy, WCV:
Mostly macro but it’s a start!

Raina Krasner, WCV:
Which was very artsy, by the way.

Raina Krasner, WCV:
Oh! And speaking of art ...

Amanda Nicholson, WCV:
Oh!

Chapin Hardy, WCV:
The debris enters the platforms, where it will be filtered out of the water and eventually stored in containers until collected for recycling on land.
Raina Krasner, WCV:
Rejoyce sent this to us earlier today ...

Karen Beasley Sea Turtle Hospital in Topsail Island, NC - Photo Credit: Jennifer Joyce

Comment From BarbG
the author did speak about art

Raina Krasner, WCV:
He did!

Amanda Nicholson, WCV:
Very cool. Which reminded me of an exhibit at the Virginia Aquarium. It was all art made from plastics. Very sad, but very beautiful at the same time.
Raina Krasner, WCV:
In fact a member of his crew was an artist, I believe.

Comment From Lydia,--PA ♥ สอบ? *♥
I saw that when I was there!

Comment From rejoicex
Yes, that piece of art was made from beach items taken from the stomachs of sea turtles.
Raina Krasner, WCV:
Gross.

Comment From ▼Dave in Missouri▼
geesh!

Comment From Izzy
Who says the solution has to come from an interested young person? Seems like the CN has some amazing individuals of all ages and backgrounds the answer could be here too :)

Raina Krasner, WCV:
True! And our author was not exactly young at the time he took on this massive project.

Comment From Lydia,--PA ♥ussy? *♥
Cleanup is the tail end of it. We have to find ways to STOP putting the plastics there in the first place. Gosh it hangs in the ocean for millions of years!

Raina Krasner, WCV:
You’re so right.

Amanda Nicholson, WCV:
Yes -- VERY true!

Chapin Hardy, WCV:
Well the kid is also making structures for rivers too!

Comment From Becky in SoCal
O.K., but once recycled on land, where does it go?

Raina Krasner, WCV:
I think there was talk of it being used for fuel? Not sure.
Chapin Hardy, WCV:
There are a number of recycling plants that partner with them and either recycle or yes, turn it into fuel!

Comment From Becky in SoCal
And I thought putting my plastic trash in the recycle can was a good thing, but now I find that most of it is really not recycled.

Comment From CK in Pa
I was shocked to learn that much of the plastic that is recycled isn't really. After years of feeling I have been doing good, how disturbing. This is so wrong.

Amanda Nicholson, WCV:
Yeah, that's a little hard to take. Plastic can't be recycled into more plastic bottles - just with the way that it's built. SOME of it is recycled ...but not all of it may be.

Comment From 33mama
Yep, and it depends where you live what can be recycled. There has to be a market for it.

Comment From CarolinaGirl 😈❤️
The part where he said recycling is often an "elaborate farce" was upsetting. We put everything recyclable in the bins. His explanation of the process didn't sound very positive.

Amanda Nicholson, WCV:
Still ... it's worth doing. I worried about that reference -- that if people take it at face value, you'd think recycling plastic isn't worth attempting.

Comment From Becky in SoCal
In the book I was impressed with the advances Germany has made in producing items that are recycled.

Comment From Jersey Shore Amy
Each cruise ship needs its own mini-recycling plant!

Chapin Hardy, WCV:
Just a side note, you can check out http://www.earth911.com/ to find recycling locations near you!

Comment From SharonShneyer, Philadelphia
How many people have shown up for this morbid, but critical discussion?
Amanda Nicholson, WCV:
52 morbid, dedicated individuals!

Comment From Becky in SoCal
There is hope!

Raina Krasner, WCV:
Yes, and the after products of recycled plastic are a little questionable - they still have all the same chemicals, and they don't withstand the test of time very well (I think he used the example of recycled plastic boardwalks).

Comment From Lydia,--PA ♥ ʕ•ᴥ•ʔ *♥
We need to get involved with our countries leaders. Bangladesh has banned the plastic bag, why can't we? Why can't the UN put pressure on all countries to do so?

Comment From CarolinaGirl ʕ•ᴥ•ʔ ♥
Most companies are only concerned about the bottom line, so....if enough people would hold them accountable by not buying their offending products.....

Comment From Becky in SoCal
What was it Ed said about us ... never under estimate what a small group of dysfunctional people can accomplish.

Comment From Izzy
What a great project! I'm amazed by how many companies over package products to the point that the level of waste far outweighs the value of the product itself! I find myself looking for products in the least amount of packaging possible! I have called companies in the past to complain about this, and some are very dismissive while others are open to being more enviro conscious!

Comment From Lydia,--PA ♥ ʕ•ᴥ•ʔ *♥
I love some of the actions Germany has taken. All the different color bins green, blue, brown, yellow, gray each for a different type of disposable. They sort at a much higher level. And the green dot program they developed is great. The industries producing it must pay for it! Producer pays for the packaging. Germany’s goal is to close all its landfills by 2020. The different colored bin program in in businesses and public places, making it easier, Moore says, for people to do the right thing. This makes good sense to me

Comment From 33mama
Wait! We didn't talk about the fact that the fishing boat leave the big nets out there on purpose! They take up too much room so they just take their catch back!
Amanda Nicholson, WCV:
Very upsetting.

Comment From 33mama
There really is a hopelessness to the topic. There is so little we as consumers can do to help.

Comment From Becky in SoCal
I was so pleased with my plastic water bottles that I now refill....I had to re-think that one.

Comment From Carol in oregon
Portland oregon has banned plastic bags and it has made a huge difference.

Comment From OHme
I just bought pens that are made from recycled bottles!!! Got them at the drugstore!

Comment From GN
We could always change the subject to killer wasps.

Comment From Becky in SoCal
We survived without plastic before, we could do that again.

Raina Krasner, WCV:
So much less upsetting, those invasive killer wasps that give me nightmares.

Comment From Becky in SoCal
It is so overwhelming to think about eliminating plastic from your life. It seems impossible.

Comment From Lydia,--PA ♥ʕ•ᴥ•ʔ♥
Especially with everything packaged in plastic.

Amanda Nicholson, WCV:
• My Plastic-Free Life: http://myplasticfreelife.com/plasticfreeguide/
I haven’t read too much about this (but want to read the book now!) but this has some good tips to start!

Comment From Pat, NJ
I think I’m gonna be sick. Didn’t get a chance to read the book but want to know what some of the solutions are.

Comment From Lydia,--PA ♥ʕ•ᴥ•ʔ♥
I sure agree with some of the proposals in the book about the green dot programs. making companies more responsible and hitting them in the money pocket.


Comment From rejoyce
It certainly is, Becky. It's one of those situations where you almost feel like it's completely hopeless.

Comment From BarbG
at least we have 52 people talking and thinking about this topic-I think the author only had 30 at his first meeting

Comment From CarolinaGirl 😍❤️
Oh, I'll keep recycling!

Comment From CarolinaGirl 😍❤️
My reusable bags live in my van and I carry a folded one in my purse. I refuse to use those plastic things!

Comment From ▼ Dave in Missouri ▼
The producers need to be held liable and do more to solve the problem!

Comment From Izzy
This topic truly reminds us that we are one person, in one city, in one state, in one country, on one continent. Yet if one person tells another person of a small solution and they tell others then soon we are not one buy many, looking to make a better world.

Comment From Jersey Shore Amy
I'm like the recycling-police at home - don't let my girls catch them putting a bottle in the trash!

Comment From ▼ Dave in Missouri ▼
I will buy WCV critter bags!:

Comment From rejoyce
Even though it was difficult to read, I think everyone should read this book.

Comment From Jersey Shore Amy
Which reminds me, I need to buy a recycling basket for the one that just moved into an apartment!

Comment From Becky in SoCal
Me, too, Dave in Missouri

Comment From rejoyce
This was about the saddest book I've ever read!

Comment From Izzy
Perhaps happy if only by learning this we can now work towards a solution

Comment From Izzy
I remember in an environmental philosophy course I took our professor gave us the example of a hermit crab carrying a cola can on its back. He said that our Earth is in such distress soon even the wildlife will misinterpret trash for a home. I think that has always stuck with me when I'm walking beaches or shorelines I always have a tote with me for trash.
**Comment From Sharon Shneyer, Philadelphia**
They've made the caps on water bottles smaller, so people think that is helping the environment, but as someone with finger problems, it makes the bottles harder for me to open. Why can't or aren't their other materials they can use?

**Raina Krasner, WCV:**
(called "greenwashing" when companies make you think they are putting a lot of effort into being sustainable when they are not).

**Comment From rejoyce**
I never developed such an instant dislike for something as I did for nurdles when reading this book!

**Comment From Jersey Shore Amy**
I have to admit that I could not read the book - I have read so much about the garbage problem and feeling overwhelmed and only able to do a small part myself.

**Comment From Kathy in NM ♥**
I think that we all had an inkling about the nature of this book when it was introduced as our next book selection, however the scope of information is truly sobering. I'll be finishing this book - even though I really don't want to - because this is too important of a subject to run away and hide from... Though we try to do our part, I do feel rather overwhelmed and helpless.

**Chapin Hardy, WCV:**
Every little bit helps!

**Comment From 33mama**
Our next book better be happy! I don't need any more stress in my life!

**Comment From rejoyce**
Anything would be a help!

**Comment From rejoyce**
A lot of the work that needs to be done really is on the part of the consumer. If people would refuse to buy products with certain packaging, companies would have to pay attention.

**Comment From Mary E in NC**
I think the point made in the book was that it's going to be impossible to clean up the ocean - we need to stop the plastic at the source, not wait till it's in the ocean. I'm sure technology could come up with better products that wouldn't be so dangerous if the incentives were there.

**Comment From Becky in SoCal**
I will also keep recycling. Every week my recycle container is twice as large as the trash.
Comment From Carol in Oregon
I was the recycling police at my school. People also watched where the put their items

Comment From Mary E in NC
I was surprised at the extent of longevity of disposable diapers - maybe we've gotten too used to convenience and don't want to take the time and effort to do better.

Comment From Lydia,--PA ♥.factory* ♥
Each one of us can at least do the 4 R's Refuse, Reduce, Reuse, Recycle

Comment From Jersey Shore Amy
So which book was sadder - the song birds or the plastic?? :(

Comment From Becky in SoCal
Jersey Shore Amy, you care, that is what is important.

Comment From Jersey Shore Amy
I keep thinking - what if Bill Gates had enough money to also help with a solution to eliminating that huge floating plastic island in the ocean?

Comment From Regina, IL
I collect the plastic bottles at work & it amazes me that some people throw away the cap instead of leaving it on the bottle.

Comment From Becky in SoCal
As sad as the book was, it is good that we know what is really happening.

Comment From Lydia,--PA ♥.factory* ♥
But hiding form the truth to make ourselves feel good only makes the problem worse, Denial is partly what got our planet in the mess it is in

Amanda Nicholson, WCV:
From the Midway video: "Do we have the courage to face the reality of our time ... and allow ourselves to feel deeply enough that it transforms us, and our future?"

Chapin Hardy, WCV:
Loved that!

Amanda Nicholson, WCV:
So ... rating for the book?
Comment From Becky in SoCal
What is the scale, again?

Amanda Nicholson, WCV:
1 - 5.

Raina Krasner, WCV:
What? We can only give it a 105.

Comment From Lydia,--PA ♥ 5•••? *♥
4 rating form me. It was a hard book to get through and I could only do a few chapters at a time. But I LEARNED so much. And it was well written and passionate, though sometimes technical.

Raina Krasner, WCV:
Oh, gotcha. :)

Comment From CarolinaGirl 5•••? ♥
Oh well then....5!

Comment From Izzy
I didn't get to read the book but if I could give a rating to the topic and discussion it evoked tonight I'd give it 5 stars! So very important and it truly opens minds.

Chapin Hardy, WCV:
It was a lot to take in and was a bit muddled in the writing in my opinion. But it was good to get the information out, so I say a 3?

Chapin Hardy, WCV:
Is that too harsh?

Comment From rejoyce
4

Comment From Mary E in NC
Excellent, but sad - I give it a 5 (is that the highest?).

Comment From BarbG
4 as it was hard to get through
Comment From Becky in SoCal
4 for me. Difficult to read, it took me 2 months, but well worth the read.

Comment From rejoyce
4

Comment From Becky in SoCal
4 for me. Difficult to read, it took me 2 months, but well worth the read.

Comment From 33mama
I would say a four. It was well written for such a sobering subject.

Chapin Hardy, WCV:
Sounds like four is our rating.

Comment From TerryMI
5 It explains plastics beginning and the damage is causes. With in depth detail

Comment From Izzy
I agree with Lydia, this picture is not happy, but humanity has painted it over time. We have to have the courage to say that this view of the world belongs in the past and that we need a more sustainable future.

Comment From Carol in oregon
I didn't finish the book but my recycler does not want the caps on plastic bottles

Comment From rejoyce
It's hard to read, but we all need to be aware of the mess we are in. It is of our own making, and we need to own up and do better.

Comment From GN
Maybe next time we can discuss the 300 million tires that are disposed of annually in the USA.

Raina Krasner, WCV:
Oh boy ...

Chapin Hardy, WCV:
I'm going to go cry into my pillow now.

Comment From 33mama
Yep. The producers need to be held accountable. There are lots of things for which there is no alternative but plastic! Ex: tooth brush!
Comment From rejoyce
Amy, they were both sad:(

Comment From BarbG
as I have been reading the book, my friends have heard about it too

Comment From rejoyce
This was one of the saddest books I've ever read, but it did make me want to go out and clean up garbage!! I'd love to be out in the ocean cleaning it!!!
Amanda Nicholson, WCV:
Hey wait.

Amanda Nicholson, WCV:
You know ... we're at our book club anniversary.

Raina Krasner, WCV:
We are.

Comment From rejoice
What's next?

Comment From Jersey Shore Amy
We are??

Comment From Becky in SoCal
Has it been a year already?

Raina Krasner, WCV:
it has!

Comment From BarbG
wow

Comment From 33mama
We are?

Comment From Regina, IL
I'm sorry I didn't read the book. I still have it. Got my library card which I haven' had in years. So I'm also recycling that .way

Comment From Izzy
book-a-versity? What do you give as a gift for that? ;) WCV donation?

Comment From CarolinaGirl ʕ•ᴥ•ʔ♥
WOW....time flies!
Raina Krasner, WCV:
Yes ...

Chapin Hardy, WCV:
Yes! Crazy to believe!

Comment From katiesmom
is there cake???

Raina Krasner, WCV:
Fake cake.

Raina Krasner, WCV:
In a cardboard box (not plastic!)

Comment From Becky in SoCal
I love this book club. It read books I would never select on my own. Thank you.

Raina Krasner, WCV:
So glad to hear that!

Amanda Nicholson, WCV:
Yay!

Chapin Hardy, WCV:
So let’s announce the next book to celebrate!

Raina Krasner, WCV:
So you may remember that this book club started after a blog post I wrote last summer.
Comment From Carol in oregon
Drum roll

Raina Krasner, WCV:
And it was inspired by a very special book.

Comment From Lydia,--PA ♥ ailability *♥
Drum Rollllllllll

Raina Krasner, WCV

A Sand County Almanac by Aldo Leopold

Chapin Hardy, WCV:
YAY!

Raina Krasner, WCV:
A Sand County Almanac!
Comment From GN
This book club thing has become an informative, fun and entertaining event. Thank you, Amanda, Raina and Chapin.

Raina Krasner, WCV:
By Aldo Leopold (who I named my dog after!)

Raina Krasner, WCV:
Thanks for joining us, GN :)

Comment From Pat, NJ
OMG, what a testimonial GN.

Comment From Jersey Shore Amy
Does it have bear stories?

Comment From rejoyce
Yes, thanks!! Love these discussions!

Comment From Lydia,--PA ♥ §••? *♥
Guess I better go to Amazonsmile!

Comment From ▼ Dave in Missouri ▼
My order is in for WCV critter bags!

Comment From Lydia,--PA ♥ §••? *♥
And sketches too? wow!

Comment From BarbG
that book is on my to-read list

Comment From Kathy in NM ♥
Yay!! Excellent choice! Have already read it and look forward to reading it again!

Raina Krasner, WCV:
Hold on!

Comment From Lydia,--PA ♥ §••? *♥
I agree with you Becky
Comment From Lydia,--PA ♥ ⚫️⚫️? *♥
Oh Happy Anniversary!!!!

Comment From BarbG
love all the books and info we have learned even if it is hard to take

Comment From Lydia,--PA ♥ ⚫️⚫️? *♥
It certainly inspired me to take action and do things differently. Just as Silence of the Songbirds did. So good results from the book

Amanda Nicholson, WCV:
Yay!

Raina Krasner, WCV:
I'd recommend that you get the anniversary edition if possible, which has the cover posted earlier.

Raina Krasner, WCV:
If that's not possible, all the versions are pretty much the same!

Comment From Becky in SoCal
As always, WCV is "teaching the world"

Amanda Nicholson, WCV:
There are several editions -- with different covers.

Comment From CarolinaGirl ⚫️⚫️♥
Is it happier???

Raina Krasner, WCV:
It's different.

Chapin Hardy, WCV:
So many choices!

Hmm...I usually get the Kindle version.
Raina Krasner, WCV:
That works, too.

Comment From sue in Maine
is Leopold the gentlemen who only became famous after his passing, his son has released all of his dad's writings

Raina Krasner, WCV:
His son did release much of his writing after his death, as I understand it.

Comment From Jersey Shore Amy
Is it a true Almanac- released each year?

Raina Krasner, WCV:
No, it's a seasonal almanac written many years ago!

Raina Krasner, WCV:
I don't want to ruin it for anyone :)

Comment From Becky in SoCal
Your dog is Aldo?

Raina Krasner, WCV:
Leopold.

Comment From Regina, IL
I remember that, Raina. I almost bought it. Now I can get it from the library. Sounded neat.

Comment From Carol in oregon
Great name.

Comment From sue in Maine
thank you Amanda, Raina and Chapin. love, love, love WCV!

Comment From sue in Maine
great name for your dog Raina
Comment From Izzy
I’ve read many of the book club books (thanks lydia) but this is the first time I came to the actual chat! Thanks Amanda, Raina, and Chapin! I learned a ton from the videos, and the discussion! You all inspire me to pick up books like these and take strides towards a better life for all things! Just think if we all start today to be plastic aware, perhaps next year we can celebrate an anniversary of when we all made a dent in a huge problem!

Comment From Lydia,--PA ♥ ¶•••? *♥
Okay. Must get to Amazon now! Thank you Amanda, Chapin and Raina for leading yet another informative book club!

Amanda Nicholson, WCV:
Yay! So glad you were able to join us!

Comment From CarolinaGirl ¶•••? ♥
Thanks ladies and CN. Great discussion of a very disturbing topic. I think we all learned a lot from this book.

Comment From Viki
Really enjoyed being here with everyone! Thanks!

Comment From Mary E in NC
Thanks so much for being here Amanda, Chapin and Raina, and for doing such a great job - I have learned so much and look forward to our next book!

Comment From CarolinaGirl ¶•••? ♥
I could only read a chapter at a time but am really glad that I got through it.

Comment From CarolinaGirl ¶•••? ♥
It does seem impossible and depressing. We can start by buying responsibly and disposing of plastic items very carefully. Doing something is better than doing nothing!

Comment From 33mama
Thank you Amanda, Raina, and Chapin for working late tonight! Great discussion!

Comment From rejoyce
Enjoy these book clubs so much! Thank you ladies so much!!!

Raina Krasner, WCV:
Next meeting will be in August - we will announce the specific date and time when he have it finalized. But assuming that evenings work well, we’ll stick with an evening in early August.
Raina Krasner, WCV:
Oops ... jeopardy.

Comment From Becky in SoCal
And, when is the next book club meeting?

Amanda Nicholson, WCV:

Amanda Nicholson, WCV
Thanks, everyone!

Comment From CK in Pa
Thanks Aamanda, Raina, Chapin & CN for another great discussion. I do enjoy WCV book club.

Comment From Kathy in NM ♥
Thank you, Amanda, Raina, Chapin and all participants for another informative, thoughtful book club.

Raina Krasner, WCV:
So glad!

Comment From rejoyce
Thanks Amanda, Raina, and Chapin!

Chapin Hardy, WCV:
It was our pleasure!

Comment From Lydia,—PA ♥★★★★♥ ♥
Glad you were here tonight Carrie! I will send you Plastic Ocean..but it is all marked up--beware!

Comment From Becky in SoCal
Thanks you Amanda, Raina and Chapin.

Comment From katiesmom
Thanks ladies

Comment From Jersey Shore Amy
Every little bit counts. Next time you get takeout in plastic or Styrofoam ask the restaurant to consider switching to the cardboard...
Comment From Lydia,--PA ♥ ♡♀♀♀ *♥
G'night all. You are the best bunch of people ever! Even GN

Comment From Lydia,--PA ♥ ♡♀♀♀ *♥
G'night all. You are the best bunch of people ever! Even GN

Comment From Regina, IL
thanks, Amanda, Raina & Chapin. Thanks WCV